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DEPARTMENT OF FISH GAME

Jerry M. Conley, Director
Clark Fork Hatchery
Annual Report



October 1, 1979 - September 30, 1980

by
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Clark Fork Hatchery

ABSTRACT

During November and December 1979, we spawned kokanee at Granite Creek (Sullivan Springs) kokanee trap. We took 1.39 million eggs, which were brought to Clark Fork Hatchery for rearing and release back into Sullivan Springs. These fry were marked with tetracycline prior to release. The run of fish was a fairly poor one, but should increase dramatically next season.

No eggs were taken from Kamloop broodstock at Clark Fork, as we had planted all the older, mature stock due to IPN problems.

During May and June, we took spawn from our Kings Lake cutthroat broodstock, 5,800 of which were transferred from Rochat Pond in April. We took 1.7 million eggs from these fish, but lost over half of them due to a water problem on 22 June. The intake structure on the hatchery water supply washed out and shut off the water to the incubators for about 5 hours before it was discovered. We had a lot of premature hatching and weak and crippled fry due to lack of oxygen.

From April through September we planted 16 lowland lakes and 4 streams with catchable rainbow transferred from Hagerman Hatchery. A total of 30,400 pounds or 125,865 fish. We also planted excess brood fish in 4 lakes and 1 stream (Kamloop and cutthroat). During this same period we planted 142,580 Kamloop fingerlings in 7 lakes and 1 stream in Region 1. Also, 21,246 Kings Lake cutthroat fry in 7 mountain lakes; 57,488 Hungry Horse cutthroat fry into Mirror Lake and 949,492 kokanee into Sullivan Springs.

During the fall of 1979, the Department of Engineering crew built concrete catch basins on the 4 broodstock ponds with steel racks to facilitate spawning operations for our cutthroat and Kamloop. They also installed new domestic water lines to all residences. In April, a private well driller put in a well for our domestic water system. The Engineering crew then installed a well pump and pressure system.

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OBJECTIVES

The objectives of the Clark Fork Hatchery are to:

1. Rear Kamloop and cutthroat brood fish.
2. Spawn, rear and distribute trout and kokanee salmon to waters of Region 1.
3. Redistribute catchable size rainbow trout reared at Hagerman Hatchery into streams, lakes and reservoirs of Region 1.

INTRODUCTION

Clark Fork Hatchery is located approximately 1.7 miles north of the town of Clark Fork on the Spring Creek road. It receives its water supply from Spring Creek and requires 8 cfs of water to operate. The hatchery has 4 large raceways, 6 feet x 312 feet; 2 medium size raceways, 6 feet x 116 feet; 6 small raceways, 6 feet x 53 feet and 4 earth broodstock ponds, 16 feet x 195 feet, and is capable of raising 40,000 pounds of fish and producing 5 million eggs at capacity. We have a kokanee trap located on Sullivan Springs about 30 miles from the hatchery which produces from 2 to 5 million eggs annually.

FISH PRODUCTION

Kokanee (Sullivan Springs, late spawning Pend Oreille)

Green eggs = 1,389,250

Eyed eggs = 1,285,530

Eye-up % = 91.9%

Planted = 949,492 fry into Sullivan Springs

Five Year Old Kings Lake Cutthroat (Hatchery broodstock)

Green eggs = 145,870

Eyed eggs = 27,550

Eye-up % = 19% (Poor eggs and water problems)

On hand

10/1/80 = 8,400 fry

These brood fish have been planted or disposed of.

Four Year Old Kings Lake Cutthroat (Transferred from Rochat Pond in April) 5,800 fish

Green eggs = 1,748,700

Eyed eggs = 1,260,051

Eye-up % = 72%

*Percent hatch = 56.5%

*On 22 June 1980, the water to the incubator trays was shut off for several hours due to a break in the intake structure. We lost approximately half of the remaining eggs at this time to suffocation. We also had quite a delayed mortality, and crippling from oxygen depletion.

Planted = 21,246 fish : 10.5 pounds in mountain lakes.

On hand

10/1/80 = 472,089 fish : 500 pounds

Three and Four Year Old Kamloop Broodstock (Gerrard stock; Clark Fork River) 900 fish

No Kamloop eggs were taken this year as we disposed of the older, mature brood fish during the spring due to age and disease potential.

FISH HEALTH

We ran the gamut as far as fish diseases go. During October and November 1979 the Hungry Horse cutthroat fry were dying in large numbers. We tried various treatments including, TM50, Sulfa, Epsom Salt, Formalin, and Malachite with no success. The fish were diagnosed as having IPN in October by Charlie Smith, FWS at Bozeman, Montana and later confirmed by virology from the Disease Control Lab. at Fort Collins, Colorado. At this time we were losing approximately 13,000 per day. Of 540,000 fry, we lost 483,000 or 89.4%. The remaining fry were planted in late December. During this same period, all the fish on the station were tested for IPN, and all showed positive. The tests were done by the Fish Disease Control Center in Fort Collins. We did not experience any mortality attributable to IPN on anything but Hungry Horse cutthroat fry. Subsequently, all fish on the station excepting 3 and 4 year old Kamloop future broodstock were planted out to reduce potential of another outbreak.

Our Kamloop and cutthroat brood fish were heavily infested with copepods and were treated with Dylox at .25-.30 PPM; 3 hour drip for 2 days, for 3 consecutive weeks, loss of 1,400 fish; treatment removed about 60% of copepods from fish. At present we don't have any copepod problems. This seems to occur mainly in the early spring. Also in early spring, we had an outbreak of Gyrodactylus in the Kamloop fingerlings and rainbow holdovers; these were treated with Purina 4X at 2 PPM for 1 hour drip; 3 day intervals, loss of 2,200 fish. Rainbow were also treated with Formalin at 1-4,000; 1 hour drip and 1 hour flush with 2 gallons cured the problem. This also seems to occur every year at the same time in this water supply.

In June, after spawning, we treated the Kings Lake cutthroat brood fish with vaccinations of Vitamin B Complex and Erythromycin for general debilitation and fungus infection. Loss of 450 fish. Treatment was successful. Also, used Malachite in 1 hour drip, 2 days a week for 3 weeks.

We water hardened all cutthroat eggs in a 20 PPM solution of Wescodyne at spawning to prevent IPN. This was done on recommendation of Dr. Klontz of the University of Idaho. We don't know if the Wescodyne worked, or other hatchery practices worked, but we have had no outbreak of IPN in the Westslope cutthroat fry.

FISH TRANSFERS

During 1979-80 we transferred 240,087 Kings Lake cutthroat fry to Sandpoint Hatchery for rearing.

FISH RELEASES

Species	Number	Pounds	Location
Rb catchable	125,865	30,4	Lowland lakes & streams
Kamloop fingerlings	109,250	3,15	Lowland lakes
Kamloop fry	33,330	101	Spring Creek
Kamloop brood	627	1,58	Lowland lakes
HH Cutthroat brood	343	425	Mirror Lake
KL Cutthroat brood	186	200	Spring Creek
KL Cutthroat brood	21,246	10.5	Mountain lakes
HH Cutthroat fry	57,488	109.	Mirror Lake
Kokanee fry	949,492	498	Sullivan Springs

SPAWN-TAKING OPERATIONS

At Clark Fork Hatchery:

Kings Lake Cutthroat = 1,894,570 eggs @ 290/ounce
610 eggs per female

At Sullivan Springs:

Late spawning Pend Oreille Kokanee = 1,389,250 eggs @ 318/ounce
450 eggs per female

FISH FEED UTILIZED

Type	Size	Pounds	Cost
Rangens Dry	All sizes	14,250	\$2,537.45
Rangen Medium	5/32 pellet	1,000	321.30
Rangen Starter		100	26.81
Clear Springs	4/32 pellet	2,650	473.04
Oregon Moist	All sizes	11,540	3,858.12
Total		29,540	\$ 7,216.72

Conversion = 2.12

When all costs were included, each pound of fish produced at Clark Fork cost \$5.65.

HATCHERY IMPROVEMENTS

Capital outlay items for this period included:

1980 Ford 2-ton truck for fish planting, various hand tools for shop; domestic water well; pump and pressure system; new water lines to all residences; four 10 feet x 20 feet concrete catch basins on broodstock ponds to facilitate spawning operations, two 36 inch culverts under the road to number 1 residence and all buildings painted on outside. We have also started something new (for this hatchery) using separate brushes for each pond, vat and trough, and disinfecting each after use. Have also started our own record keeping system, a definite improvement on nothing.

SPECIAL STUDIES

No special studies were done at this station.

MISCELLANEOUS

During the fall of 1979 we had a serious outbreak of IPN. We lost 95% of the Hungry Horse cutthroat fry to this, and subsequently planted the remainder to avoid losing all. During the spring 1980, we planted all the older Kamloop and cutthroat broodstock to avoid further contamination by egg transmittal. Four year old Kings Lake cutthroat brood fish were obtained from Rochat Pond and all eggs taken were water hardened in Wescodyne.

Approximately 2,500 people visited the hatchery during this period. Regional cooperation in this region is very good. The best I have experienced. We have no communication problems.

The Mount St. Helens eruption dusted us with about 1/8 inch of dust and working conditions were bad for about a week, but no fish or egg loss could be attributed to it.

HATCHERY NEEDS

A new pipeline from the small spring to the hatchery building to replace the old wooden line.

Water alarms are needed on the hatchery building and incubator room water supplies.

A new concrete headbox on the supply pond pipeline to the hatchery building.

A better, more permanent kokanee trapping facility on Sullivan Springs, as the old trap will not hold the expected numbers of fish next year.

A boat to be moored at Hope, to reach Granite Creek after road becomes impassible.

A better, more dependable 4x4 vehicle for transporting eggs and personnel to and from Granite Creek.

ACKNOWLEDGMENTS

Hatchery staffing during the fish year included: Gary Baker, Fish Hatchery Superintendent II; Alan Williams, Fish Hatchery Superintendent I; Bruce Thompson, Fish Culturist; Chris Gagin, YACC employee, and Eric McMillen, CETA employee.